In the United States Patent and Trademark Office

Appellants:	J. Qin et al.	Docket No.:	12975
Serial No.:	08/759,108	Group:	1713
Filed:	December 2, 1996	Examiner:	M. Reddick
For:	ABSORBENT COMPOSITION	Date:	June 29, 1999

Appeal Brief Transmittal Letter

ASSISTANT COMMISSIONER FOR PATENTS
Box AF
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. 1.192, transmitted herewith in triplicate is an Appeal Brief pursuant to the Notice of Appeal which was mailed on April 23, 1999 and received by the United States Patent and Trademark Office on April 29, 1999.

Please charge the $300.00 fee, pursuant to 37 C.F.R. 1.17(c), which is due to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875. This Appeal Brief Transmittal Letter is submitted in duplicate.

Respectfully submitted,

J. QIN ET AL..

By: Sebastian C. Pugliese III
Sebastian C. Pugliese III
Registration No.: 42091

CERTIFICATE OF MAILING

I, Tracy M. Smith, hereby certify that on June 29, 1999 this document is being deposited with the United States Postal Service as first-class mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

By: Tracy M. Smith
Tracy M. Smith

In the United States Patent and Trademark Office

Appellants:	J. Qin et al.	Docket No.:	12975
Serial No.:	08/759,108	Group:	1713
Filed:	12/2/96	Examiner:	M. Reddick
For:	Absorbent Composition	Date:	29 June 1999

Brief on Appeal to the Board of Patent Appeals and Interferences

ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. 1.192 Appellants respectfully submit this Brief in support of their Appeal of Examiner Reddick's **Final Rejection** of claims 1, 2, 4-16, and 33 which was mailed on 25 November 1998.

On 23 April 1999, Appellants, pursuant to 37 C.F.R. 1.191 mailed a timely Notice of Appeal that was received by the United States Patent and Trademark Office on April 29, 1999. Thus, the time period for filing this Brief ends on 29 June 1999.

In accordance with 37 C.F.R. 1.192(a) this Appeal Brief is filed in triplicate.

Real Party in Interest

The present Application has been assigned to the Kimberly-Clark Worldwide, Inc.

Related Appeals and Interferences

None

Status of the Claims

Claims 1, 2, 4-16, and 33 remain in the application with claims 1, 2, 4-16, and 33 being finally rejected.

Status of Amendments Filed Subsequent to Final Rejection

None

Summary of the Invention

An absorbent composition comprising a mixture of: (a) an acidic water-swellable, water-insoluble polymer having a pKa between about 2 and about 12 wherein the acidic, water-swellable, water-insoluble polymer comprises acidic functional groups and has at least about 50 molar percent of the acidic functional groups in free acid form; and (b) a basic material; wherein the absorbent composition exhibits a Free Swell value that is at least about 15 grams per gram of absorbent composition and a Time to Reach 60 Percent of Free Swell Capacity value of at least about 5 minutes and wherein the mixture is not a molecular level dispersion of the acidic water-swellable, water-insoluble polymer and the basic material.

The present invention also concerns a disposable absorbent product comprising a liquid-permeable topsheet, a backsheet attached to the topsheet, and an absorbent structure positioned between the topsheet and the backsheet wherein the absorbent structure comprises an absorbent composition of the present invention.

The Issues Presented

Whether claims 1, 2, 4-16, and 33 are unpatentable under 35 U.S.C. s. 102(b) as anticipated by, or, in the alternative, under 35 U.S.C. s. 103 as obvious over, U.S. Patent No. 5,264,471.

Grouping of the Claims

With respect to the issue presented, claims 1, 2, 4-16 and 33 stand or fall as a group.

Argument

Claims 1, 2, 4-16 and 33 stand rejected under 35 U.S.C. 102(b) as anticipated by, or, in the alternative, under 35 U.S.C. 103 as obvious over U.S. Patent No. 5,264,471 ("Chmelir"). More particularly, the Examiner asserts: "Chmelir vehemently states that the present invention is characterized by the fact that component B (corresponding to the basic material per the claimed invention) is added in the form of a powder to the polymer gel of component A (corresponding to polymer component a) of the claimed invention) and, in order to obtain a powdery, pourable end product, is dried, if necessary, and ground. To this end, this clearly meets the limitations of being a non-molecular level of dispersion A and B." Appellants respectfully disagree.

There is no technical basis for the Examiner to assume that components B and A in Chmelir correspond to the basic material and polymer component of Appellants' claimed invention. In Chmelir, components B and A can both be acidic; or they can both be basic; or they can both be neutral; or

component B can be acidic and component A can be neutral; or component B can be basic and component A can be neutral; or component B can be neutral and component A can be acidic; or component B can be neutral and component A can be basic. Even so, none of the foregoing combinations anticipate or suggest Appellants' claimed invention, which recites: a) an acidic polymer having at least 50% acidic groups, and b) a basic material.

Viewed another way, Chmelir teaches a process of adding a solution, liquid, or solid component B into component A, which is an end phase product of polymerization. As an end phase product of polymerization, component A is necessarily a swollen gel (superabsorbent polymerization always involves water, whether it is a suspension polymerization or a gel polymerization). Taking the case in which B is a solid, and assuming B and A are initially basic and acidic, respectively, the presence of water will initiate a neutralization reaction between components B and A. B and A may stay separate but will be converted into B' and A' due to the neutralization. This would not anticipate Appellants' claimed invention, which is an absorbent composition containing an acidic polymer and a basic material, not neutral materials. For example, if B is chitosan powder and it is applied onto the surface of a swollen polyacrylic acid gel (A), the presence of water will trigger ion exchanging between A and B which results in the polyacrylic acid gel (A) converting to polyacrylate gel (A') and, at the same time, results in chitosan (B) converting to chitosan salt (B'). The polyacrylate (A') is no longer an acidic polymer gel (A' is neutral) and chitosan salt (B') is no longer a basic material (B' is neutral). Consequently, the resulting mixture comprising A' and B' does not anticipate or suggest Appellants' invention.

Also, Appellants' invention requires an acidic polymer component having a pKa from about 2 to about 12 in order to achieve desired slow fluid absorption rate. Chmelir does not teach or suggest this feature.

For the foregoing reasons, Appellants believe that claims 1, 2, 4-16, and 33 are patentable over the Chmelir reference.

Appendix – The Claims On Appeal

The claims on appeal are:

1. An absorbent composition comprising a mixture of:

a) an acidic water-swellable, water-insoluble polymer having a pK_a between about 2 and about 12 wherein the acidic water-swellable, water-insoluble polymer comprises acidic functional groups and has at least about 50 molar percent of the acidic functional groups in free acid form; and

b) a basic material;

wherein the absorbent composition exhibits a Free Swell value that is at least about 15 grams per gram of absorbent composition and a Time to Reach 60 Percent of Free Swell Capacity value of at least about 5 minutes and wherein the mixture is not a molecular level dispersion of the acidic water-swellable, water-insoluble polymer and the basic material.

2. The absorbent composition of Claim 1 wherein the acidic water-swellable, water-insoluble polymer has a pKa between about 2 and 10.

4. The absorbent composition of Claim 3 wherein the acidic water-swellable, water-insoluble polymer has at least about 70 molar percent of the acidic functional groups in free acid form.

5. The absorbent composition of Claim 1 wherein the acidic water-swellable, water-insoluble polymer has a weight average molecular weight greater than about 100,000.

6. The absorbent composition of Claim 5 wherein the acidic water-swellable, water-insoluble polymer has a weight average molecular weight greater than about 200,000.

7. The absorbent composition of Claim 1 wherein the acidic water-swellable, water-insoluble polymer is prepared from a base polymer selected from the group consisting of polyacrylamides, polyvinyl alcohols, ethylene maleic anhydride copolymer, polyvinylethers, polyacrylic acids, polyvinylpyrrolidones, polyvinylmorpholines, carboxymethyl celluloses, carboxymethyl starches, hydroxypropyl celluloses, algins, alginates, carrageenans, acrylic grafted starches, acrylic grafted celluloses, polyaspartic acid, polyglutamic acid, and copolymers comprising at least two of the preceding polymers.

8. The absorbent composition of Claim 1 wherein the basic material is selected from the group consisting of polyamines, polyimines, polyamides, polyquaternary ammoniums, chitins, chitosans, polyasparagins, polyglutamines, polylysines, polyarginines, organic salts, aliphatic amines, aromatic amines, imines, amides, metallic oxides, hydroxides, salts, and mixtures thereof.

9. The absorbent composition of Claim 8 wherein the basic material is a water-swellable, water-insoluble polymer.

10. The absorbent composition of Claim 9 wherein the water-swellable, water-insoluble polymer basic material has a pKb between about 2 and 12.

11. The absorbent composition of Claim 1 wherein the acidic water-swellable, water-insoluble polymer and the basic material are present in the absorbent composition in a molar ratio between about 10:1

and 1:10.

12. The absorbent composition of Claim 1 wherein the absorbent composition has a Free Swell value of at least about 20.

13. The absorbent composition of Claim 1 wherein the absorbent composition has a Time to Reach 60 Percent of Free Swell Capacity value of between about 10 minutes and 200 minutes.

14. The absorbent composition of Claim 1 wherein the absorbent composition has an Absorbency Under Load value of at least about 15.

15. The absorbent composition of Claim 1 wherein the absorbent composition has a Time to Reach 60 Percent of Absorbency Under Load Capacity value of at least about 5 minutes.

16. The absorbent composition of Claim 1 wherein the water-swellable, water-insoluble polymer comprises acidic functional groups and has at least about 50 molar percent of the acidic functional groups in free acid form, has a weight average molecular weight greater than about 100,000, and the acidic water-swellable, water-insoluble polymer and the basic material are present in the absorbent composition in a molar ratio between about 10:1 and 1:10.

33. A disposable absorbent product comprising a liquid-permeable topsheet, a backsheet attached to the topsheet, and an absorbent structure positioned between the topsheet and the backsheet wherein the absorbent structure comprises an absorbent composition comprising:

a) an acidic water-swellable, water-insoluble polymer having a pKa between about 2 and about 12 wherein the acidic water-swellable, water-insoluble polymer comprises acidic functional groups and has at least about 50 molar percent of the acidic functional groups in free acid form; and

b) a basic material;

wherein the absorbent composition exhibits a Free Swell value that is at least about 15 grams per gram of absorbent composition and a Time to Reach 60 Percent of Free Swell Capacity value of at least about 5 minutes and wherein the absorbent composition is not a molecular level dispersion of the acidic water-swellable, water-insoluble polymer and the basic material.

Conclusion

For the reasons stated above it is Appellants' position that the Examiner's rejection of claims has been shown to be untenable and should be **reversed** by the Board.

Please charge the $300.00 fee, pursuant to 37 C.F.R. 1.17(c), for filing this Appeal Brief to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875. Any additional prosecutional fees which are due may also be charged to deposit account number 11-0875.

The undersigned may be reached at: (920) 721-2747

Respectfully submitted,

JIAN QIN ET AL.

By: Sebastian C. Pugliese III

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CERTIFICATE OF MAILING

I, Tracy M. Smith, hereby certify that on June 29, 1999 this document is being deposited with the United States Postal Service as first-class mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

By: Tracy M. Smith

Tracy M. Smith

Inventor(s): J. Qin, et al.

Docket No. 12975
Attorney SCP

Serial No.: 08/759,108
Date Filed: December 2, 1996
Title: ABSORBENT COMPOUND

( ) Amendment

( ) Extension of Time
( ) Issue Fee
( ) Maintenance Fee
( ) Formal Drawings

( ) Notice of Appeal
(X) Appeal Brief
( ) Information Disclosure Statement
( ) Missing Parts of Application

The stamp of the U.S. Patent and Trademark Office hereon indicates receipt of the items indicated above.